REMARKS

This amendment is in response to the Examiner's Office Action dated 3/28/2005. Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow. Minor amendments have been made, without adding new matter, to claims 1, 6, 7, and 8

STATUS OF CLAIMS

Claims 1-3 and 6-8 are pending.

Claims 1 and 6-8 are objected to by the examiner for informalities.

Claims 6 and 7 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the requirement for enablement.

Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fredette et al. (USP 6697361 B2) in view of Nagami et al. (USP 6683874 B1).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a path setup device and method for label switching network. According to the present invention, upon reception of a label request for a new flow, a path setup device searches label switched paths (LPSs) which have already been set up for comparison with a path contained in the label request. If an LSP exists of the same path as that in the label request, the same label as that of the LSP is allocated. If no such LSP exists, a new label is allocated. An LSP is set up based on the allocated label.

In the Claims

Claims 1 and 6-8 are objected to by the examiner for informalities. Minor amendments have been made, without adding new matter, to correct the informalities pointed out by the examiner. Applicants respectfully request the examiner to reconsider the claims in light of the amendments.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 6 and 7 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the requirement for enablement. Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Minor amendments have been made, without adding new matter, to correct the informalities pointed out by the examiner. Applicants respectfully request the examiner to reconsider the claims in light of the amendments.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fredette et al. (USP 6,697,361 B2) in view of Nagami et al. (USP 6,683,874 B1). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereof. Applicant contends that the combination of the Fredette and Nagami references fail to provide many of the limitations of applicant's pending claims.

Fredette et al. teach a method for aggregating data streams in a multi-protocol label switching (MPLS) network, wherein the method comprises the steps of: receiving a label

assignment request that includes a merge identifier to identify a portion of a path followed by the label assignment request through the MPLS network; determining whether the portion of the path has been used by any of a plurality of previous label assignment requests; and assigning a new label for the portion of the path if the portion of the path has not been used by any of the plurality of previous label assignment requests, otherwise assigning a previously assigned label for the portion of the path; and returning an indication of either the new label or the previously assigned label based on the determination.

Nagami et al. provides for a router device with which the required number of label switched path settings is reduced and, consequently, installation of the router device becomes easier. According to Nagami et al., the router stores router identification information of a target router (to be set as an egress router, if possible) in an egress router list at a time of setting up a label switched path from the router, and the router uses the stored information to execute control to set up the label switched path to the target router stored in the egress router list. Then, according to Nagami et al., a label switched path identification information of the label switched path set up according to the control and an address information to be given to packets that are to be transferred by passing through the target router stored in the egress router list, are stored in correspondence in a routing table, and a routing processing for the packets is carried out according to the label switched path identification information and the address information stored in the routing table.

Applicants agree with the examiner's statement on page 5 of the office action where the examiner states that the Fredette reference lacks the limitation of "when a request to release the another label has been received, the label allocation device notifies the path learning device of

the new path and the path learning device learns the new path as a path that cannot be allocated the another label". Applicants', however, respectfully disagree with the examiner's statement on the same page of the office action that such a limitation is remedied for by figure 4 of the Nagami et al. reference.

Figure 4 of Nagami et al. merely shows an exemplary deletion procedure. According to figure 4 of Nagami et al., the router R1 recognizes that the network A has been deleted according to the OSPF routing information. Then, whether the recognized router is the egress router or not is checked at step S201. In this case, it is not the egress router, so the processing proceeds to step S204. Then, according to Nagami et al., it can be ascertained that the network A has been deleted according to the OSPF routing information so that the network A registered in the network list is deleted (step S204). Then, the item of the network A is deleted from the routing table (step S205).

Next, according to Nagami et al., the router R1 recognizes that the router R5 has been deleted according to the OSPF routing information. Since the router R5 is the egress router (step S201 YES), the label switched path to the router R5 is deleted (by an LDP control unit 10 in an exemplary configuration to be described below) (step S202). Then, the deleted router R5 and label switched path (#2 in the example of figure 1 of Nagami et al.) are deleted from the network list. Next, according to Nagami et al., a route to the router R5 is deleted from the routing table. In addition, the networks C and D that are reachable from the router R5 are also deleted from the network list. Also similarly as done for the router R5, routers to the networks C and D are also deleted from the routing table (step S203). Next, according to Nagami et al., the network list is updated at step S204, but in the case where the router R5 is deleted in this network; there is no

change in the network route after the router R5 and the networks C and D are deleted so that nothing is done here. Similarly nothing is done at step S205 either.

Further, in Nagami et al., the processing, at step S105 of the set up procedure of figure 3, involves a processing for deleting an LSP corresponding to a network from the routing table when this network is deleted from the network list corresponding to the egress router at the network list updating at step S104, and the processing at step S204 of the deletion procedure of figure 4 of Nagami et al. involves a processing for adding an LSP corresponding to a network to the routing table when this network is added to the network list corresponding to the egress router, and the processing is to be carried out in the case where there is a need to delete another already set up label switched path at a time of setting up a label switched path or the case where there is a need to set up another label switched path at a time of deleting an already set up label switched path, that is, the case where the route change occurs to be specific, for example.

Hence, it is clear from the above-description, figure 4 of Nagami et al. merely shows a deletion procedure.

In stark contrast, the learning device of applicants' claimed invention is concerned with automatically learning a set-up label switched path that cannot be allocated another label which is the same as a label for the set-up label switched path and prohibiting allocation of such another label for the learned path, and wherein when a request to release another label has been received, the different label allocation device notifies the path learning device of the path and the path learning device learns the notified path as a path that cannot be allocated another label.

Applicants are unsure how the "deletion procedure" of Nagami can be equated to the claimed limitation of a learning device (claim 1), the claimed limitation of a program that causes a computer to automatically learn a path (as per claim 6), the claimed limitation of a step of automatically learning a path (as per claim 7), and the claimed limitation of a path learning means (as per claim 8).

In applicants' independent claims 1 and 8, the path learning device or path learning means automatically learns a path that cannot be allocated with a same label and prohibits allocation of the same label for the learned path, wherein when a request to release the same label has been received, the different-label allocation device notifies the path learning device of the path and the path learning device learns the notified path as a path that cannot be allocated the same label. Applicants respectfully contend that such limitations of the path learning device can neither be taught nor suggested by the "deletion procedure" outlined in figure 4 of Nagami et al.

Similarly in applicants' independent claims 6 and 7, a limitation involves automatically learning a path that cannot be allocated with a same label and prohibiting allocation of label for the learned path, and when a request to release the same label has been received, learning the learned path as a path that cannot be allocated said same label – a limitation that is neither taught nor suggested by the "deletion procedure" outlined in figure 4 of Nagami et al.

Applicants respectfully contend that the above-mentioned claimed limitations are clearly different from Nagami et al.'s deleting means for deleting a path and a network. Applicants wish to note that the Fredette reference, used alone or in combination with the Nagami reference, neither teaches nor suggest the above-mentioned limitations.

The above-mentioned arguments presented for independent claim 1 substantially apply to dependent claims 2-3 as they inherit all the limitations of the claim from which they depend (i.e., claim 1).

If the examiner still feels that the "deleting means" of Nagami can be equated to the "path learning" limitation of applicants' claimed invention, applicants respectfully reminds the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,

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